

COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

68340 U.S. PRO
08/846670
04/30/97

Transmitted herewith for filing is the patent application of inventor(s): Jens Ole Sorensen

For: Deleteriously Affecting Members Of A Target Species By Exposure To A Component Of Symbiont Or Food Source Of An Adjoiner Species That Is Symbiotic With The Target Species

Enclosed are:

- [X] ^{One} ~~Three~~ high quality copies of the drawing consisting of three (3) sheets each.
- [X] An assignment of the invention to Universal Ventures
- [] A certified copy of a _____
- [] An associate power of attorney
- [X] A verified statement to establish small entity status under 37 CFR 1.9 and 37 CFR 1.27.

The filing fee has been calculated as shown below:

	(Col. 1)	(Col. 2)
FOR	NO. FILED	NO. EXTRA
BASIC FEE		
TOTAL CLAIMS	264 - 20 =	* 244
INDEP. CLAIMS	12 - 3 =	* 9
[] MULTIPLE DEPENDENT CLAIM PRESENTED		

SMALL ENTITY	
RATE	FEE
	\$ 385
X11 =	\$2684
X40 =	\$ 360
X130 =	\$ 130
TOTAL	\$3559

OTHER THAN A SMALL ENTITY	
RATE	FEE
	\$ 750
X22 =	\$
X78 =	\$
+250 =	\$
TOTAL	\$

* If the difference in Col. 1 is less than zero, enter "0" in Col. 2.

- [] Please charge my Deposit Account No. _____ in the amount of \$ _____. A duplicate copy of this sheet is enclosed.
- [X] A check in the amount of \$ 3559.00 to cover the filing fee is enclosed.
- [X] The Commissioner is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 03-0375. A duplicate copy of this sheet is enclosed.
- [X] Any additional filing fees required under 37 CFR 1.16.
- [X] Any patent application processing fees under 37 CFR 1.17.
- [X] The Commissioner is hereby authorized to charge payment of the following fees during the pendency of this application or credit any overpayment to Deposit Account No. _____. A duplicate copy of this sheet is enclosed.
- [X] Any patent application processing fees under 37 CFR 1.17.
- [] The issue fee set in 37 CFR 1.18 at or before mailing of the Notice of Allowance, pursuant to 37 CFR 1.311 (b).
- [X] Any filing fees under 37 CFR 1.16 for presentation of extra claims.

Edward W Callan
Edward W. Callan
Attorney for Applicant(s)
Registration No. 24,720

Edward W. Callan
3033 Science Park Road
San Diego, California 92121
(619)552-9575

**DELETERIOUSLY AFFECTING MEMBERS OF A TARGET SPECIES BY
EXPOSURE TO A COMPONENT OF SYMBIONT OR FOOD SOURCE OF AN
ADJOINER SPECIES THAT IS SYMBIOTIC WITH THE TARGET SPECIES**

BACKGROUND OF THE INVENTION

5 The present invention generally pertains to materials that deleteriously affect members of a target species and is particularly directed to identifying, manufacturing, testing and using such materials.

 It has been known to identify components of members of test species that deleteriously affect members of a target species by a method including the steps of:

10 (a) separating at least one member of each of a plurality of test species into a plurality of components;

 (b) exposing at least some of said separated components of said member(s) of the test species separately to members of the target species; and

15 (c) examining said exposures to determine for said identification whether members of the target species have been deleteriously affected by said exposures.

20 This method has been conducted to identify materials that are deleterious to a target species that is a symbiont of an adjoiner species, such as a parasite of the adjoiner species. Although such identification method has been practised with test species that are symbionts or traditional food sources of the adjoiner species, it is believed that such symbiotic relationship and such food-source relationship between the test species and the adjoiner species have been merely incidental to broad screenings of a plurality of different test species based upon their chemical compositions rather than an intentional aspect of the method. A food source includes plants and animals and secretions and waste products therefrom, such as honey, pollen, sap, milk, feces and urine.

Symbiotic relationships between different species include (a) a parasitic relationship, wherein one species benefits from the relationship and the other species is harmed by the relationship; (b) mutualism, wherein both species benefit from the relationship; (c) commensalism, wherein one species benefits from the relationship and the other species is unaffected by the relationship; and (d) amensalism, wherein one species is harmed by the relationship and the other species is unaffected by the relationship.

SUMMARY OF THE INVENTION

The present invention provides a method of identifying components of members of test species that deleteriously affect members of a target species, comprising the steps of:

(a) separating at least one member of a test species into a plurality of components;
(b) exposing at least some of said separated components of said member(s) of the test species separately to members of the target species, wherein the target species is a symbiont of an adjainer species; and

(c) examining said exposures to determine for said identification whether members of the target species have been deleteriously affected by said exposures;

wherein steps (a), (b) and (c) are executed methodically and systematically with a large number of test species that are symbionts or traditional food sources of the adjainer species.

In another aspect of the present invention, step (a) is executed with such a large number of test species that are symbionts or traditional food sources of the adjainer species that the ratio of execution of step (a) when the test species are symbionts or traditional food sources of the adjainer species relative to execution of step (a) when the test species are not symbionts or traditional food sources of the adjainer species is significantly higher than said ratio of execution according to the prior art.

5 In a further aspect of the present invention, wherein step (a) comprises separating at least one member of each of a plurality of test species into a plurality of components, steps (b) and (c) are executed in such large numbers when the test species are symbionts or traditional food sources of the adjainer species that the ratio of execution of steps (b) and (c) when the test species are symbionts or traditional food sources of the adjainer species relative to execution of steps (b) and (c) when the test species are not symbionts or traditional food sources of the adjainer species is significantly higher than said ratio of execution according to the prior art.

10 In an additional aspect, the present invention provides a method of identifying components of members of a test species that deleteriously affect members of a target species, comprising the steps of:

(a) separating at least one member of the test species into a plurality of components;

15 (b) exposing at least some of said separated components of said member(s) of the test species separately to members of the target species, wherein the target species is a symbiont of an adjainer species; and

(c) examining said exposures to determine for said identification whether members of the target species have been deleteriously affected by said exposures;

20 wherein steps (b) and (c) are executed in such large numbers when the test species is a symbiont or a traditional food source of the adjainer species that the ratio of execution of steps (b) and (c) when the test species is a symbiont or a traditional food source of the adjainer species relative to execution of steps (b) and (c) when the test species is not a symbiont or a traditional food source of the adjainer species is significantly higher than said ratio of execution according to the prior art.

In a still another aspect, the present invention provides a method of identifying components of members of a test species that deleteriously affect members of a target species, comprising the steps of:

5 (a) identifying the test species as a symbiont or a traditional food source of a given adjointer species when the test species had not been known to be a symbiont or a traditional food source of the given adjointer species;

(b) separating at least one member of the test species into a plurality of components;

10 (c) exposing at least some of said separated components of said member(s) of the test species separately to members of the target species, wherein the target species is a symbiont source of the adjointer species; and

(d) examining said exposures to determine for said identification whether members of the target species have been deleteriously affected by said exposures.

15 In a yet another aspect, the present invention provides a method of identifying components of members of a test species that deleteriously affect members of a target species, comprising the steps of:

(a) exposing at least a component of at least one member of the target species to at least one member of the test species;

20 (b) subsequent to step (a), separating said exposed at least one member of the test species into a plurality of components;

(c) exposing at least some of said separated components of said member(s) of the test species separately to members of the target species, wherein the target species is a symbiont of an adjointer species and the test species is a symbiont or a traditional food source of the adjointer species; and

25 (d) examining said exposures to determine for said identification whether members of the target species have been deleteriously affected by said exposures.

The present invention provides each separated component of a member of a test species identified by any of the above-described identification methods as deleteriously affecting members of a target species or an equivalent of said identified component.

5 The present invention further provides methods of manufacturing products including a test-species component identified by any of the foregoing methods as deleteriously affecting members of a target species and/or an equivalent of said identified component, as described below in the detailed description of the preferred embodiments.

The present invention also provides products manufactured according to such methods of manufacture

10 The present invention additionally provides methods of using and testing products manufactured according to such methods of manufacture, as described below in the detailed description of the preferred embodiments.

Additional features of the present invention are described with reference to the detailed description of the preferred embodiments.

15 **BRIEF DESCRIPTION OF THE DRAWING**

FIG. 1 is a block diagram of one preferred embodiment of the identification method of the present invention.

FIG. 2 is a block diagram of another preferred embodiment of the identification method of the present invention.

FIG. 3 is a block diagram of a further preferred embodiment of the identification method of the present invention.

FIG. 4 is a block diagram showing preferred embodiments of product manufacturing methods according to the present invention

5 FIG. 5 is a block diagram of one preferred embodiment of a product testing method according to the present invention

FIG. 6 is a block diagram of another preferred embodiment of a product testing method according to the present invention

DETAILED DESCRIPTION

10 In the various embodiments of the present invention described herein, the adjoiner species include but are not limited to the human species, a species having a near-human-species genetic composition, such as chimpanzees and pigs, and other species afflicted with parasitic diseases; the target species include but are not limited to HIV (the AIDS-causing virus), cancer causing viruses, E.coli bacteria, histoplasma capsulatum (which causes histoplasmosis), borrelia burgdoferi (which causes Lyme's disease), the typhoid
15 fever causing virus, the Norwalk virus and the rotovirus; and the test species include but are not limited to plasmodium falciparum, plasmodium ovale, plasmodium vivax, and plasmodium malariae (all four of which are species of malaria), treponema pallidum (syphilis), the smallpox virus, mycobacterium tuberculosis, ascaris lumbricoides
20 (tapeworm), deratophyte (athlete's foot), helicobacter pylori (ulcer-causing bacteria) and traditional food sources of the adjoiner species, including co-evolutionary food sources of

the adjainer species that previously had not been known to be food sources of the adjainer species.

Referring to FIG. 1, one preferred embodiment of the method of the present invention of identifying components of members of test species that deleteriously affect members of a target species that is a symbiont of a given adjainer species includes a step 10 of separating at least one member of a test species that is a symbiont or a traditional food source of the given adjainer species into a plurality of components; a step 12 of exposing at least some of the separated components of the member(s) of the test species separately to members of the target species; and a step 14 of examining such exposures to determine for such identification whether members of the target species have been deleteriously affected by such exposures; wherein the separation step 10, the exposure step 12 and the examination step 14 are executed methodically and systematically with a large number of test species that are symbionts or traditional food sources of the adjainer species.

In some preferred embodiments, the separation step 10 is executed with such a large number of test species that are symbionts or traditional food sources of the adjainer species that the ratio of execution of the separation step 10 when the test species are symbionts or traditional food sources of the adjainer species relative to execution of the separation step 10 when the test species are not symbionts or traditional food sources of the adjainer species is significantly higher than said ratio of execution according to the prior art.

In some preferred embodiments, the exposure step 12 and the examination step 14 are executed in such large numbers when the test species are symbionts or traditional food sources of the adjainer species that the ratio of execution of the exposure step 12 and the

examination step 14 when the test species are symbionts or traditional food sources of the adjoiner species relative to execution of steps the exposure step 12 and the examination step 14 when the test species are not symbionts or traditional food sources of the adjoiner species is significantly higher than said ratio of execution according to the prior art.

5 Referring to FIG. 2, another preferred embodiment of the method of the present invention of identifying components of members of a test species that deleteriously affect members of a target species that is a symbiont of a given adjoiner species includes a step 18 of identifying the test species as a symbiont or a co-evolutionary food source of the given adjoiner species when the test species had not been known to be a symbiont or a co-
10 evolutionary food source of the given adjoiner species, respectively; a step 20 of separating at least one member of the test species into a plurality of components; a step 22 of exposing at least some of the separated components of the member(s) of the test species separately to members of the target species; and a step 24 of examining such exposures to determine for such identification whether members of the target species have
15 been deleteriously affected by such exposures.

In some preferred embodiments of the methods described above, prior to the separation step 10, 20, the method includes a step (not shown) of exposing at least a component of the target species to at least one member of the test species for the purpose of establishing any immunity of such target-species component to the test species as may
20 be established.

Referring to FIG. 3, a further preferred embodiment of the method of the present invention of identifying components of members of a test species that deleteriously affect members of a target species that is a symbiont of a given adjoiner species includes a step 30 of exposing at least a component of at least one member of the target species to at least

one member of a test species that is a symbiont or a traditional food source of the given
adjoiner species; a subsequent step 32 of separating the exposed at least one member of
the test species into a plurality of components; a step 34 of exposing at least some of the
separated components of the member(s) of the test species separately to members of the
5 target species; and a step 36 of examining such exposures to determine for such
identification whether members of the target species have been deleteriously affected by
such exposures. Preferably, this method further includes a step (not shown) of interposing
a sufficient period of time between the first exposure step 30 and the separation step 32 to
enable the exposed test species member(s) to react to the exposure of the target-species
10 component to the test-species member.

In some embodiments of the above-described methods, members of the test species
at least in some aspect deleteriously affect members of the adjoiner species.

In some embodiments of the above-described methods, members of the target
species at least in some aspect deleteriously affect members of the adjoiner species.

15 Preferred embodiments of methods according to the present invention of
manufacturing a product including a test-species component identified by any of the
above-described methods as deleteriously affecting members of a target species and/or an
equivalent of said identified component are described with reference to FIG. 4. The
product is manufactured either by a step 40 of separating the identified component in bulk
20 quantities from said members of said test species or by a step 42 of synthesizing the
identified component and/or an equivalent of the identified component in bulk quantities.
The manufacturing method may further include a step 44 of modifying the product to
decrease any deleterious effect upon the adjoiner species caused by the identified
component and/or the equivalent of the identified component; and/or a step 46 of

modifying the product to increase the deleterious effect upon the target species caused by the identified component and/or the equivalent of the identified component. The deleterious effect can be modified by varying the quantity of the identified component and/or the equivalent of the identified component within the product.

5 Referring to FIG. 5, one preferred embodiment of a method according to the present invention of testing the above-described manufactured product, includes a step 50 of exposing the product to the adjainer species or a member of a trial species; and a step 52 of examining such exposure to determine the extent of any deleterious effect upon the adjainer species or the trial species respectively. Preferably, the trial species reacts to such exposure in a manner equivalent to such a reaction by the adjainer species.

10 Referring to FIG. 6, another preferred embodiment of a method according to the present invention of testing the above-described manufactured product, includes a step 56 of exposing the product to the target species; and a step 58 of examining such exposure to determine the extent of the deleterious effect upon the target species.

15 A preferred embodiment (not shown) of a method according to the present invention of using a component of a member of a test species identified by the any of the above-described methods and/or an equivalent of the identified component to treat an adjainer species that is afflicted with a target species includes the step of exposing the identified component and/or the equivalent of the identified component to members of the target species that are residing in or on a member of the adjainer species. Preferably, such exposure is accomplished by using a product manufactured by one of the above-described manufacturing methods.

20

In some, but not all, of the various embodiments of the deleterious-component identifying methods according to the present, it is preferred that during the step of exposing separated components of member(s) of the test species to members of the target species, the exposed members of the target species are isolated from the adjoiner species.

5 The advantages specifically stated herein do not necessarily apply to every conceivable embodiment of the present invention. Further, such stated advantages of the present invention are only examples and should not be construed as the only advantages of the present invention.

10 While the above description contains many specificities, these should not be construed as limitations on the scope of the present invention, but rather as examples of the preferred embodiments described herein. Other variations are possible and the scope of the present invention should be determined not by the embodiments described herein but rather by the claims and their legal equivalents.

CLAIMS

1. A method of identifying components of members of test species that deleteriously affect members of a target species, comprising the steps of:

(a) separating at least one member of a test species into a plurality of components;

(b) exposing at least some of said separated components of said member(s) of the test species separately to members of the target species, wherein the target species is a symbiont of an adjainer species; and

(c) examining said exposures to determine for said identification whether members of the target species have been deleteriously affected by said exposures;

wherein steps (a), (b) and (c) are executed methodically and systematically with a large number of test species that are symbionts of the adjainer species.

2. A method according to Claim 1, wherein step (a) is executed with such a large number of test species that are symbionts of the adjainer species that the ratio of execution of step (a) when the test species are symbionts of the adjainer species relative to execution of step (a) when the test species are not symbionts of the adjainer species is significantly higher than said ratio of execution according to the prior art.

2 3. A method of identifying components of members of test species that deleteriously affect members of a target species, comprising the steps of:

(a) separating at least one member of a test species into a plurality of components;

4 (b) exposing at least some of said separated components of said member(s) of the test species separately to members of the target species, wherein the target species is a symbiont of an adjoiner species; and

6 (c) examining said exposures to determine for said identification whether members of the target species have been deleteriously affected by said exposures;

8 wherein step (a) is executed with such a large number of test species that are symbionts of the adjoiner species that the ratio of execution of step (a) when the test species are symbionts of the adjoiner species relative to execution of step (a) when the test species are not symbionts of the adjoiner species is significantly higher than said ratio of execution according to the prior art.

10 4. A method according to Claim 1 or 3, wherein steps (b) and (c) are executed in such large numbers when the test species are symbionts of the adjoiner species that the ratio of execution of steps (b) and (c) when the test species are symbionts of the adjoiner species relative to execution of steps (b) and (c) when the test species are not symbionts of the adjoiner species is significantly higher than said ratio of execution according to the prior art.

2 5. A method of identifying components of members of test species that deleteriously affect members of a target species, comprising the steps of:

4 (a) separating at least one member of each of a plurality of test species into a plurality of components;

6 (b) exposing at least some of said separated components of said member(s) of the test species separately to members of the target species, wherein the target species is a symbiont of an adjoiner species; and

8 (c) examining said exposures to determine for said identification whether members of the target species have been deleteriously affected by said exposures;

10 wherein steps (b) and (c) are executed in such large numbers when the test species are symbionts of the adjoiner species that the ratio of execution of steps (b) and (c) when the test species are symbionts of the adjoiner species relative to execution of steps (b) and (c) when the test species are not symbionts of the adjoiner species is significantly higher than said ratio of execution according to the prior art.

2 6. A method of identifying components of members of a test species that deleteriously affect members of a target species, comprising the steps of:

4 (a) separating at least one member of the test species into a plurality of components;

6 (b) exposing at least some of said separated components of said member(s) of the test species separately to members of the target species, wherein the target species is a symbiont of an adjoiner species; and

8 (c) examining said exposures to determine for said identification whether members of the target species have been deleteriously affected by said exposures;

10 wherein steps (b) and (c) are executed in such large numbers when the test species is a symbiont of the adjoiner species that the ratio of execution of steps (b) and (c) when the test species is a symbiont of the adjoiner species relative to execution of steps (b) and (c) when the test species is not a symbiont of the adjoiner species is significantly higher than said ratio of execution according to the prior art.

2 7. A method according to Claim 1, 3, 5 or 6, further comprising the step of:

4 (d) prior to step (a), identifying the test species as a symbiont of the given adjoiner species when the test species had not been known to be a symbiont of the given adjoiner species.

2 8. A method of identifying components of members of a test species that deleteriously affect members of a target species, comprising the steps of:

4 (a) identifying the test species as a symbiont of a given adjoiner species when the test species had not been known to be a symbiont of the given adjoiner species;

6 (b) separating at least one member of the test species into a plurality of components;

8 (c) exposing at least some of said separated components of said member(s) of the test species separately to members of the target species, wherein the target species is a symbiont of the adjoiner species; and

10 (d) examining said exposures to determine for said identification whether members of the target species have been deleteriously affected by said exposures.

2 9. A method according to Claim 1, 3, 6 or 8, further comprising the step of:

(e) prior to said separation step, exposing at least a component of the target species to at least one member of the test species.

10. A method of identifying components of members of a test species that deleteriously affect members of a target species, comprising the steps of:

(a) exposing at least a component of at least one member of the target species to at least one member of the test species;

(b) subsequent to step (a), separating said exposed at least one member of the test species into a plurality of components;

(c) exposing at least some of said separated components of said member(s) of the test species separately to members of the target species, wherein the target species is a symbiont of an adjoiner species and the test species is a symbiont of the adjoiner species; and

(d) examining said exposures to determine for said identification whether members of the target species have been deleteriously affected by said exposures.

11. A method of identifying components of members of test species that deleteriously affect members of a target species, comprising the steps of:

(a) separating at least one member of a test species into a plurality of components;

(b) exposing at least some of said separated components of said member(s) of the test species separately to members of the target species, wherein the target species is a symbiont of an adjoiner species; and

(c) examining said exposures to determine for said identification whether members of the target species have been deleteriously affected by said exposures;

wherein steps (a), (b) and (c) are executed methodically and systematically with a large number of test species that are traditional food sources of the adjoiner species.

2 12. A method according to Claim 11, wherein step (a) is executed with such a
4 large number of test species that are traditional food sources of the adjoiner species that
6 the ratio of execution of step (a) when the test species are traditional food sources of the
adjoiner species relative to execution of step (a) when the test species are not traditional
food sources of the adjoiner species is significantly higher than said ratio of execution
according to the prior art.

2 13. A method of identifying components of members of test species that
deleteriously affect members of a target species, comprising the steps of:

(a) separating at least one member of a test species into a plurality of components;

4 (b) exposing at least some of said separated components of said member(s) of the
6 test species separately to members of the target species, wherein the target species is a
symbiont of an adjoiner species; and

8 (c) examining said exposures to determine for said identification whether members
of the target species have been deleteriously affected by said exposures;

10 wherein step (a) is executed with such a large number of test species that are
12 traditional food sources of the adjoiner species that the ratio of execution of step (a) when
the test species are traditional food sources of the adjoiner species relative to execution of
step (a) when the test species are not traditional food sources of the adjoiner species is
significantly higher than said ratio of execution according to the prior art.

2 14. A method according to Claim 11 or 13, wherein steps (b) and (c) are executed
4 in such large numbers when the test species are traditional food sources of the adjainer
6 species that the ratio of execution of steps (b) and (c) when the test species are traditional
food sources of the adjainer species relative to execution of steps (b) and (c) when the test
species are not traditional food sources of the adjainer species is significantly higher than
said ratio of execution according to the prior art.

2 15. A method of identifying components of members of test species that
deleteriously affect members of a target species, comprising the steps of:

4 (a) separating at least one member of each of a plurality of test species into a
plurality of components;

6 (b) exposing at least some of said separated components of said member(s) of the
test species separately to members of the target species, wherein the target species is a
symbiont of an adjainer species; and

8 (c) examining said exposures to determine for said identification whether members
of the target species have been deleteriously affected by said exposures;

10 wherein steps (b) and (c) are executed in such large numbers when the test species
are traditional food sources of the adjainer species that the ratio of execution of steps (b)
12 and (c) when the test species are traditional food sources of the adjainer species relative to
execution of steps (b) and (c) when the test species are not traditional food sources of the
14 adjainer species is significantly higher than said ratio of execution according to the prior
art.

2 16. A method of identifying components of members of a test species that deleteriously affect members of a target species, comprising the steps of:

4 (a) separating at least one member of the test species into a plurality of components;

6 (b) exposing at least some of said separated components of said member(s) of the test species separately to members of the target species, wherein the target species is a symbiont of an adjoiner species; and

8 (c) examining said exposures to determine for said identification whether members of the target species have been deleteriously affected by said exposures;

10 wherein steps (b) and (c) are executed in such large numbers when the test species is a traditional food source of the adjoiner species that the ratio of execution of steps (b) and (c) when the test species is a traditional food source of the adjoiner species relative to execution of steps (b) and (c) when the test species is not a traditional food source of the adjoiner species is significantly higher than said ratio of execution according to the prior art.

12 17. A method according to Claim 11, 13, 15 or 16, further comprising the step of:

2 (d) prior to step (a), identifying the test species as a co-evolutionary food source of the given adjoiner species when the test species had not been known to be a co-evolutionary food source of the given adjoiner species.

2 18. A method of identifying components of members of a test species that deleteriously affect members of a target species, comprising the steps of:

4 (a) identifying the test species as a co-evolutionary food source of the given adjoiner species when the test species had not been known to be a co-evolutionary food source of the given adjoiner species;

6 (b) separating at least one member of the test species into a plurality of components;

8 (c) exposing at least some of said separated components of said member(s) of the test species separately to members of the target species, wherein the target species is a symbiont of the adjoiner species; and
10

12 (d) examining said exposures to determine for said identification whether members of the target species have been deleteriously affected by said exposures.

2 19. A method according to Claim 11, 13, 16 or 18, further comprising the step of:

(e) prior to said separation step, exposing at least a component of the target species to at least one member of the test species.

20. A method of identifying components of members of a test species that deleteriously affect members of a target species, comprising the steps of:

(a) exposing at least a component of at least one member of the target species to at least one member of the test species;

(b) subsequent to step (a), separating said exposed at least one member of the test species into a plurality of components;

(c) exposing at least some of said separated components of said member(s) of the test species separately to members of the target species, wherein the target species is a symbiont of an adjainer species and the test species is a traditional food source of the adjainer species; and

(d) examining said exposures to determine for said identification whether members of the target species have been deleteriously affected by said exposures.

21. A method according to any of Claims 1, 3, 5, 6, 8, 10, 11, 13, 15, 16, 18 or 20, wherein the adjainer species is the human species.

22. A method according to any of Claims 1, 3, 5, 6, 8, 10, 11, 13, 15, 16, 18 or 20, wherein the adjainer species has a near-human-species genetic composition.

23. A separated component of a member of a test species identified by the method of any of Claims 1, 3, 5, 6, 8, 10, 11, 13, 15, 16, 18 or 20 as deleteriously affecting members of a target species or an equivalent of said identified component.

24. A method of using a component of a member of a test species identified by the method of any of Claims 1, 3, 5, 6, 8, 10, 11, 13, 15, 16, 18 or 20 as deleteriously affecting members of a target species and/or an equivalent of said identified component, comprising the step of:

(e) exposing said identified component and/or an equivalent of said identified component to members of the target species that are residing in or on a member of the adjoiner species.

25. A method of manufacturing a product including a test-species component identified by the method of any of Claims 1, 3, 5, 6, 8, 10, 11, 13, 15, 16, 18 or 20 as deleteriously affecting members of a target species and/or an equivalent of said identified component, comprising the step of:

(e) providing said component in bulk quantities.

26. A product manufactured according to the method of Claim 25.

27. A method according to Claim 25, further comprising the step of:

(f) modifying the product to decrease any deleterious effect upon the adjoiner species caused by the identified component and/or said equivalent thereof.

28. A product manufactured according to the method of Claim 27.

29. A method according to Claim 25, further comprising the step of:

(f) modifying the product to increase the deleterious effect upon the target species caused by the identified component and/or said equivalent thereof.

30. A product manufactured according to the method of Claim 29.

2 31. A method according to Claim 25, wherein step (e) comprises separating said component in bulk quantities from said members of said test species.

32. A product manufactured according to the method of Claim 31.

2 33. A method according to Claim 25, wherein step (e) comprises synthesizing said component and/or an equivalent thereof in bulk quantities.

34. A product manufactured according to the method of Claim 33.

2 35. A method of testing a product manufactured according to Claim 25, comprising the steps of:

4 (f) exposing said product to the adjoiner species or a member of a trial species; and

(g) examining said exposure of step (f) to determine the extent of any deleterious effect upon the adjoiner species or the trial species respectively.

2 36. A method of testing a product manufactured according to Claim 25, comprising the steps of:

4 (f) exposing said product to the target species; and

(g) examining said exposure of step (f) to determine the extent of the deleterious effect upon the target species.

37. A method according to Claim 10 or 20, further comprising the step of:

2 (e) interposing a sufficient period of time between steps (a) and (b) to enable said exposed test species member(s) to react to said exposure of step (a).

38. A method according to Claims 1, 3, 5, 6, 8, 10, 11, 13, 15, 16, 18 or 20,
2 wherein members of the test species at least in some aspect deleteriously affect members of the adjoiner species.

39. A method according to Claims 1, 3, 5, 6, 8, 10, 11, 13, 15, 16, 18 or 20,
2 wherein members of the target species at least in some aspect deleteriously affect members of the adjoiner species.

40. A method according to Claims 1, 3, 5, 6, 8, 10, 11, 13, 15, 16, 18 or 20,
2 wherein during said step of exposing separated components of member(s) of said test species to members of the target species, said exposed members of the target species are
4 isolated from the adjoiner species.

ABSTRACT OF THE DISCLOSURE

A component of a member of a test species that deleteriously affects a target species that is a parasite of a given adjoiner species is identified by a method including a step (a) of separating at least one member of a test species that is a symbiont or a traditional food source of the given adjoiner species into a plurality of components; a step (b) of exposing at least some of the separated components of the member(s) of the test species separately to members of the target species; and a step (c) of examining such exposures to determine for such identification whether members of the target species have been deleteriously affected by such exposures; wherein steps (a), (b) and (c) are executed methodically and systematically.

A product including such a test-species component identified as deleteriously affecting members of a target species and/or an equivalent of the identified component is manufactured either by separating the identified component in bulk quantities from members of the test species or by synthesizing the identified component and/or an equivalent of the identified component in bulk quantities. The product is tested to determine the extent of any deleterious effect upon the adjoiner species and the extent of the deleterious effect of the product upon the target species. The method of manufacturing the product may further include modifying the product to decrease any deleterious effect upon the adjoiner species and/or modifying the product to increase the deleterious effect upon the target species.

DECLARATION/POWER OF ATTORNEY FOR PATENT APPLICATION

Docket No. 18-106

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled DELETERIOUSLY AFFECTING MEMBERS OF A TARGET SPECIES BY EXPOSURE TO A COMPONENT OF SYMBIOTIC OR FOOD SOURCE OF AN ADJONER SPECIES THAT IS SYMBIOTIC WITH THE TARGET SPECIES, the specification of which is attached hereto unless the following box is checked:

☐ was filed on _____ as United States Application Number or PCT International Application Number _____ and was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	Priority Claimed <input type="checkbox"/> Yes <input type="checkbox"/> No
-------------------	--------------------	---------------------------------	--

I hereby claim the benefits under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below.

_____ (Application Number)	_____ (Filing Date)
-------------------------------	------------------------

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

_____ (Application Number)	_____ (Filing Date)	_____ (Status - patented, pending, abandoned)
-------------------------------	------------------------	--

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: Edward W. Callan, Attorney Registration No. 24,720

Address all telephone calls to Edward W. Callan at telephone number (619) 552-9575
Address all correspondence to Edward W. Callan, 3033 Science Park Road, San Diego, CA 92121

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor (given name, family name) Jens Ole Sorensen

Inventor's signature Jens Ole Sorensen Date Apr. 30 - 1997
Residence Cayman Kai, Cayman Islands, B.W.I. Citizenship Denmark
Post Office Address P.O. Box 221, North Side, Grand Cayman, Cayman Islands, B.W.I.

☐ Additional inventors are being named on separately numbered sheets attached hereto.

**VERIFIED STATEMENT CLAIMING SMALL ENTITY STATUS
(37 CFR 1.9(f) & 1.27(c))--SMALL BUSINESS CONCERN**

Docket No.: 12-106

Applicant or Patentee: JENS OLE SORENSEN

Serial or Patent No.:

Filed or Issued: HEREWITH

Title: Deliciously Affecting Members Of A Target Species By Exposure To A Component Of Symbiotic Or Food Source Of An Adjacent Species That Is Symbiotic With The Target Species

I hereby declare that I am

- ☒ the owner of the small business concern identified below:
☐ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF SMALL BUSINESS CONCERN Universal VenturesADDRESS OF SMALL BUSINESS CONCERN P.O. Box 222 GT, Cayman Islands, B. W. I.

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.12, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees to the United States Patent and Trademark Office, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention described in:

- ☒ the specification filed herewith with title as listed above.
☐ the application identified above.
☐ the patent identified above.

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights in the invention must file separate verified statements averring to their status as small entities, and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern or organization having any rights in the invention is listed below:

- ☒ No such person, concern, or organization exists.
☐ Each such person, concern or organization is listed below.

Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING: Jens Ole SorensenTITLE OF PERSON IF OTHER THAN OWNER: Vice PresidentADDRESS OF PERSON SIGNING: P.O. Box 221, North Side, Grand Cayman, Cayman Islands, B. W. I.

SIGNATURE

DATE

April 30 - 97

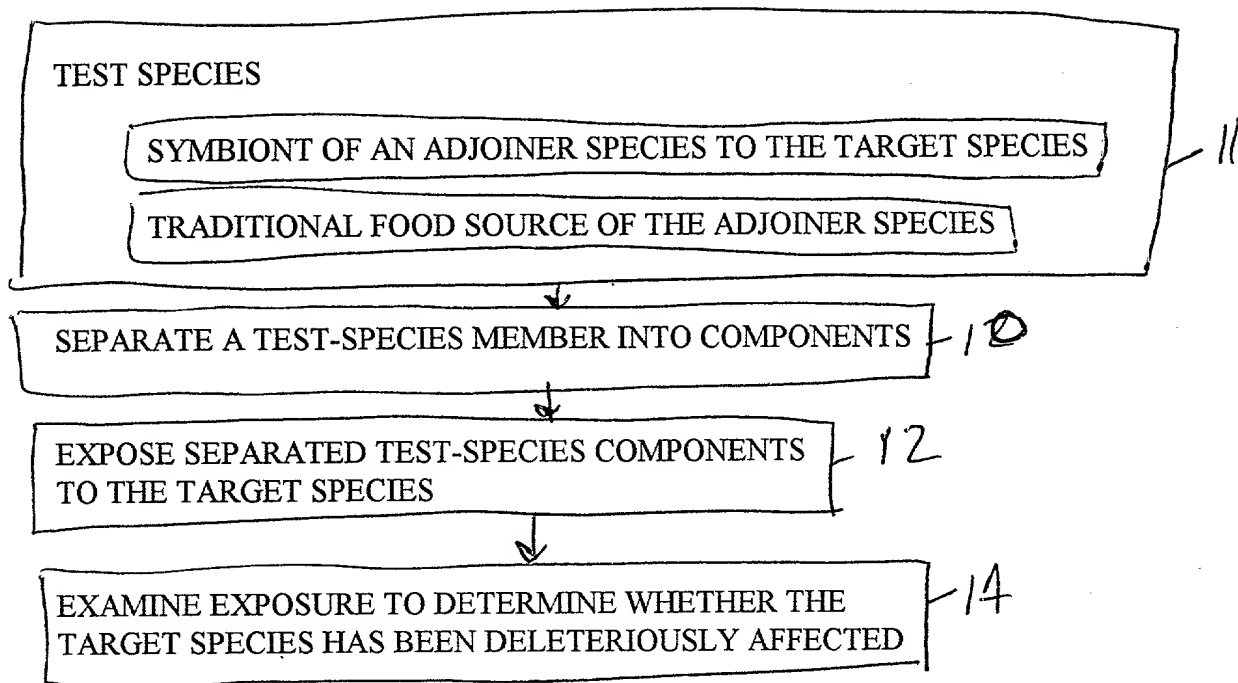


FIG.1

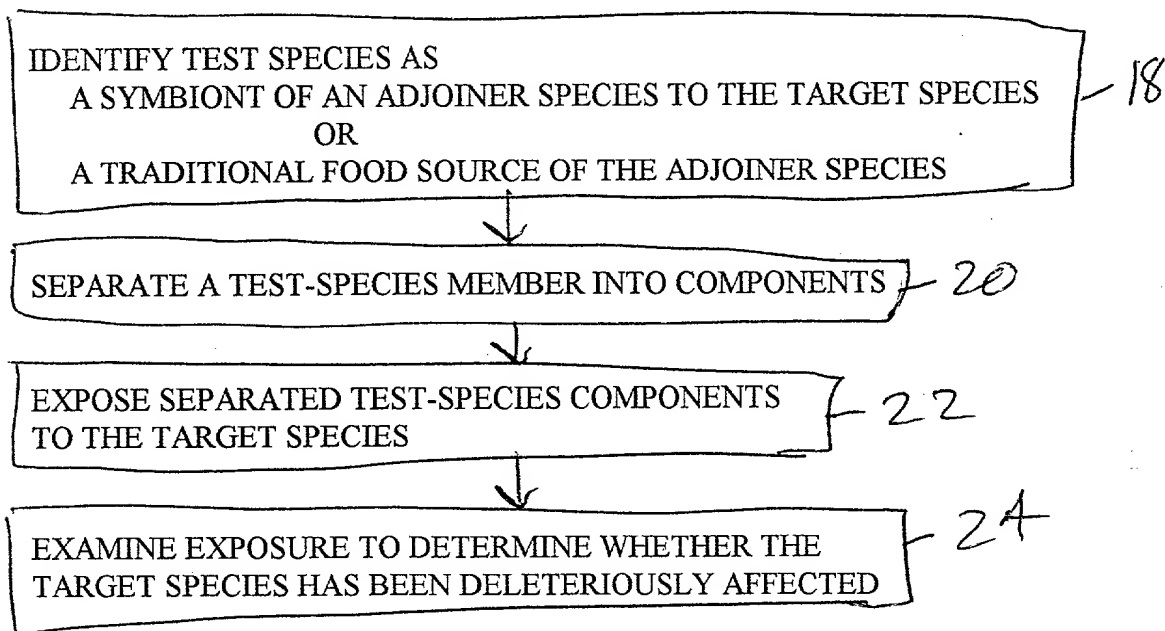


FIG.2

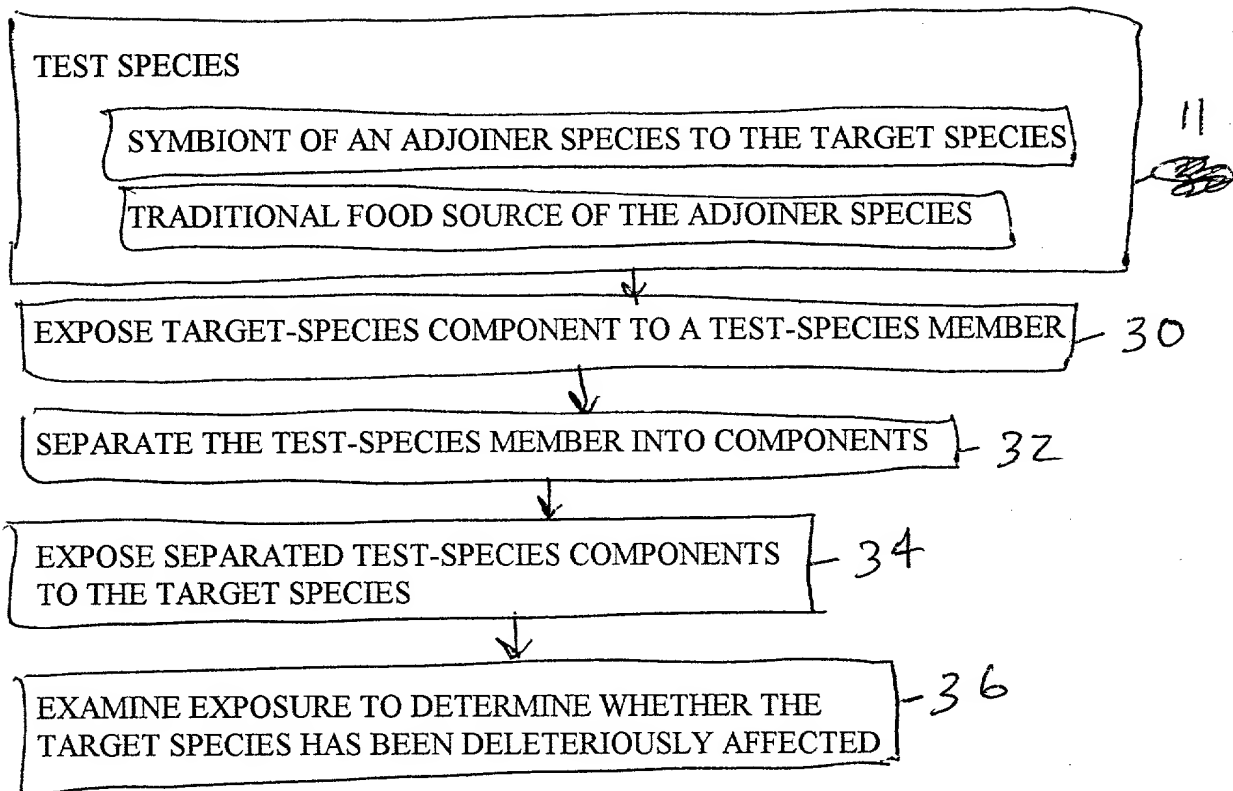


FIG. 3

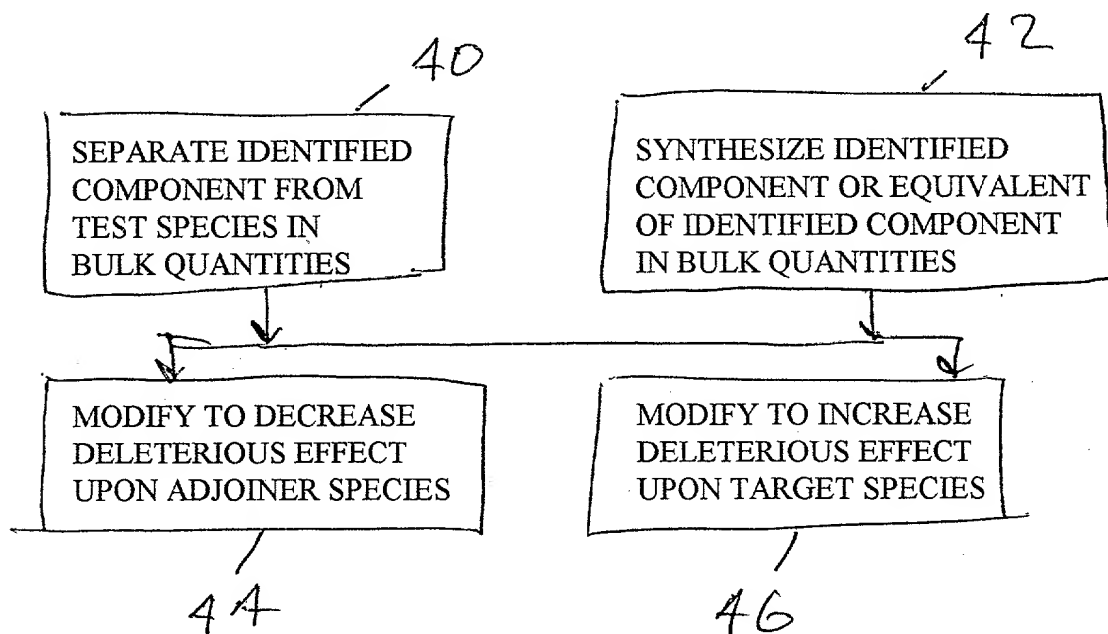


FIG. 4

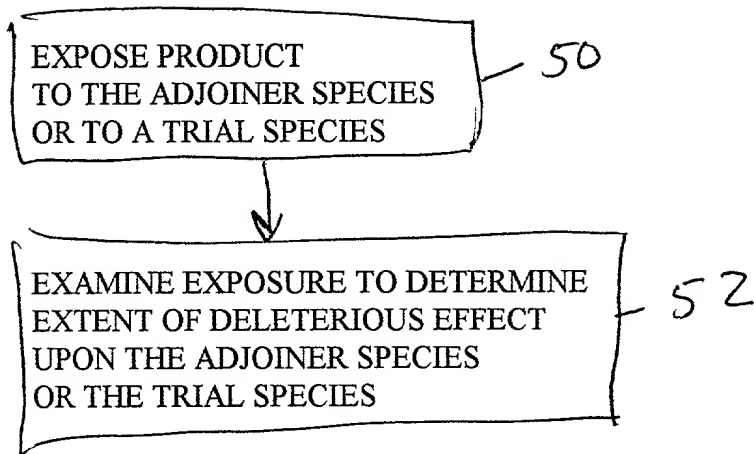


FIG.5

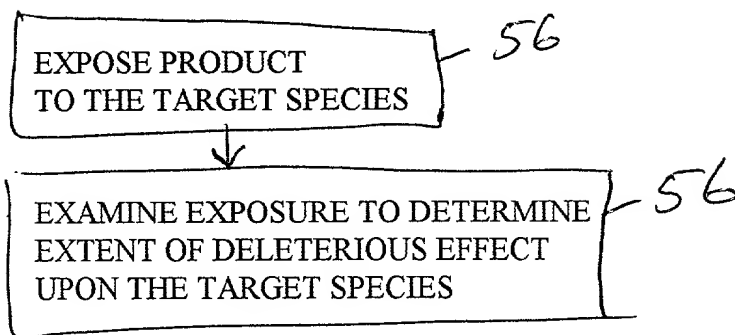


FIG.6